

CLAIMS:

## 1. A power controller including:

a casing;

5 a control unit disposed within the casing being configurable to any of a plurality of modes of operation to control power delivery to a light and being responsive to a stimulus wirelessly conveyed thereto from outside the casing to configure to a selected mode of operation determined by the stimulus, the control unit being arranged to receive control signals wirelessly conveyed  
10 thereto from outside the casing and to control said power delivery according to the control signals wherein the response of the control unit to control signals differs according to the mode of operation determined by the stimulus.

## 2. A power controller according to any preceding claim in which the control unit

15 is responsive to said stimulus to configure to an activated mode in which it is responsive to said control signals to controllably deliver power to the light from a deactivated mode in which it does not deliver power to the light, and vice versa.

## 3. A power controller according to any preceding claim including a remote unit

20 outside said casing and operable to wirelessly transmit said control signals to the control unit, in which the control unit is responsive to said stimulus to configure to a programming mode in which it is responsive to said control signals to be programmed thereby to respond in a predetermined way to a  
25 predetermined operation of the remote unit.

4. A power controller according to any preceding claim in which the control unit includes a magnetic detector means and the stimulus is a magnetic field strength in response to which the magnetic detector means is operable to generate a configure signal, wherein the control unit is responsive to the configure signal to configure to a mode of operation determined by the configure signal.
5. A power controller according to claim 4 including a stimulus means remote from the control unit and outside said casing and including a magnetic field means for providing a magnetic field of sufficient strength to be remotely detectable by the magnetic detector.
6. A power controller according to any of claims 4 and 5 in which the control unit is configurable to a selected mode of operation according to any of: the duration of a given configure signal; the number of a succession of configure signals; the rate of receipt of successive configure signals thereby; the magnitude of a given configure signal.
7. A power controller according to any of claims 5 to 6 in which the magnetic field means is a permanent magnet.
8. A power controller according to any of claims 4 to 7 in which the magnetic detector means includes a sensor means including any of: a reed switch; a Hall-Effect switch, a magnetic relay switch; an inductor coil, and the magnetic detector is responsive to said stimulus using the sensor means.

9. A power controller according to any preceding claim suitable for outdoor use in which the control unit is encased in a substantially watertight weather-proof casing.
- 5 10. A power controller according to any preceding claim in which the casing is transparent.
- 10 11. A power controller according to any preceding claim in which the control signals are conveyed using any of: Infra-red (IR) light; microwaves; radio waves.
- 15 12. A power controller according to any preceding claim in which the control unit is configurable to a mode of operation in which it is responsive to said control signals to change the amount of electrical power delivered to the light in use to controllably vary the radiant output of the light.
- 20 13. A power controller according to any preceding claim in which the control unit includes a photo-sensor means within the casing for determining the level of ambient illumination outside the casing, and for configuring the control unit to a mode of operation according to the ambient illumination level so determined.
- 25 14. A power controller according to any preceding claim including a power source connector means arranged to connect to the power source from which the light receives power in use such that the power from the power source passes through the power controller before reaching the light, wherein the power

controller is arranged to control the delivery of power from the power source to the light.

15. A power controller according to claim 14, wherein the casing includes a plurality of prongs extending outwardly thereof and shaped to be intimately received within a reciprocally shaped socket means of the power source connector means such that the casing is detachably attachable to the power source connector means therewith, the prongs being operably connected to the control unit to convey power from the power source to the light via the control unit when the casing is attached to the power source connector means in use.

16. A power controller including:

a casing;

a control unit disposed within the casing and arranged to control power delivery to a light;

a heat sink means disposed within the casing in a space between the control unit and parts of the casing, the heat sink means including a group of vane members each positioned in an array of vane members collectively surrounding at least a part of the control unit in which vane members are arranged to partially overlap a neighbouring vane member in separated opposition thereto to define fluid ventilation ducts, the vane members extending to collectively define a fluid ventilation conduit in fluid communication with the fluid ventilation ducts and within which the at least a part of the control unit is located.

17. A power controller according to claim 16 wherein the fluid ventilation conduit defines an outlet opening at an end thereof for the outflow of fluid drawn into the fluid ventilation conduit.

5 18. A power controller according to claim 17 in which the outlet opening of the fluid ventilation conduit is in fluid communication with at least some of said fluid ventilation ducts via free space outside the fluid ventilation conduit between the heat sink means and the casing.

10 19. A power controller according to any of claims 17 to 18 in which the vane members extend to collectively converge towards the outlet opening such that the fluid ventilation conduit collectively defined by the vane members is substantially conical having an inner bore which reduces towards the outlet opening.

15 20. A power controller according to any of claims 17 to 19 in which the vane members are joined by a cover member which extends over the control unit and within which is formed an aperture defining the outlet opening.

20 21. A power controller according to claim 20 in which the vane members and the cover member collectively define a concavity within which the control unit is located.

25 22. A power controller according to any of claims 20 and 21 in which the control unit is connected to the heat sink means.

23. A power controller according to any of claims 20 to 22 in which the control unit is physically attached to the cover member.

24. A power controller according to any of claims 16 to 23 in which the control unit includes temperature monitor means for measuring the temperature within the casing and for configuring the control unit to a deactivated mode when the temperature is measured by the temperature monitor means to exceed a predetermined value.

25. A power controller according to any of claims 16 to 24 in which the surface of the heat sink means presented outwardly towards the casing is matt black in colour.

26. A power controller according to any of claims 16 to 25 in which the separation between partially overlapping parts of neighbouring vane members of the heat sink means is at least 0.5 mm.

27. A power controller according to any of claims 20 to 26 in which the cover member contains a plurality of apertures each of which defines a fluid ventilation outlet opening.

28. A power controller according to any of claims 16 to 27 in which the fluid conduit has a fluid inlet opening at an end of the conduit opposite the end having the fluid outlet opening, and in fluid communication with the free space between the heat sink and the casing outside the heat sink.

29. A power controller according to claim 28 in which the fluid inlet opening faces the part of the casing upon which the control unit is mounted, in spaced opposition thereto.

5 30. A power controller according to claim 28 or 29 in which the parts of the heat sink defining the fluid inlet opening surround the control unit.

31. A power controller according to any of claims 1 to 15 and according to any of claims 16 to 30.

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32. A method of controlling power delivery to a light including:

providing a power controller according to any of claims 1 to 15 or claim 31;

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wirelessly conveying a stimulus to the power controller from outside the casing thereof to configure to a selected mode of operation determined by the stimulus;

wirelessly conveying control signals to the controller from outside the casing to control said power delivery according to the control signals.

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33. A method according to claim 32 including providing said stimulus to configure the control unit to an activated mode in which is responsive to said control signals to controllably deliver power to the light from a deactivated mode in which it does not deliver power to the light, or vice versa.

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34. A method according to claim 32 or claim 33 including wirelessly transmitting said control signals to the control unit after configuring the power controller to a programming mode in which it is responsive to said control signals to be



programmed thereby to respond in a predetermined way to subsequent control signals.

35. A method according to any of claims 32 to 34 in which the stimulus is a magnetic field strength, the method including generating a configure signal using the control unit in response to the stimulus, and configuring the control unit to a mode of operation determined by the configure signal.

36. A method according to claim 35 including configuring the control unit to a selected mode of operation according to any of: the duration of a given configure signal; the number of a succession of configure signals; the rate of receipt of successive configure signals thereby; the magnitude of a given configure signal.

37. A method according to any of claims 32 to 36 including configuring the control unit to a mode of operation in which it is responsive to control signals to change the amount of electrical power delivered to the light in use to controllably vary the radiant output of the light, and wirelessly transmitting such control signals to the control unit.

38. A method according to any of claims 32 to 37 including providing a photo-sensor means within the casing for determining the level of ambient illumination outside the casing, and configuring the control unit to a suitable mode of operation according to the ambient illumination level so determined.

39. A method according to any of claims 32 to 38 including connecting the control unit to the power source from which the light receives power in use, and



directing the power from the power source through the control unit before reaching the light, and controlling the delivery of power from the power source to the light using the control unit.

- 5      40. A method according to any of claims 32 to 39 including measuring the temperature of the control unit and configuring the control unit to a deactivated mode when the temperature is measured to exceed a predetermined value.